

CATALOGUE

OF THE

CRETACEOUS FOSSILS

IN THE

BRIGHTON MUSEUM.



PRESENTED BY

PRESENTED BY

H. Willett

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BRIGHTON:

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PREFACE.

This Collection of Sussex Chalk Fossils is the result of the loving labour of the leisure hours of ten years.

My love of Natural History was directed into this channel through the casual acquaintance (when quite a boy) of the late GIDEON MANTELL, ESQ., F.G.S., LL.D. When, in 1841, I came to live at Brighton, I found that his valuable and interesting Collection had been removed to the British Museum.

While the great Natural Storehouse of extinct Animal Forms still remained, the Fossils daily discovered in the large Chalk Quarries round Lewes were destroyed as worthless, because there was no one to care for them.

Regretting that so many objects of beauty and interest should not be redeemed from destruction, I devoted my pocket-money and spare time to the amusement of (1) Inducing the workmen to observe and lay aside for me everything the chalk contained that was not a flint ;

and (2) To collecting and developing the treasures thus obtained.

I use the word "treasures" advisedly ; for had I been so inclined, I could have disposed of the Collection for a considerably larger sum of money than it had cost me ; but I preferred to present it to the Museum of this Town, in the hope that it would not only be a Local Record of Fossil Remains of the neighbourhood, but that its Exhibition might induce other Young Men to direct some of their spare hours in the intervals of active business to its study, and thereby to share the same pleasures, and find the same advantages in the pursuit, that I have done.

These advantages are neither small nor few ; for while I admit, on a casual glance, there is nothing very attractive in a chalk fossil, yet the delight of discovering some *new* relic of Creative Power hitherto unknown to Science is as great to the discoverer as that of a new planet or comet is to the astronomer ; while it surpasses the joy of a gold-digger at finding a "nugget," inasmuch as he has no fear that any one will steal it.

The pleasure of a Collector in meeting with a fossil fish in a chalk stone, is not surpassed by that of an angler who has hooked a living one ; and the enjoyment of developing the form of a beautiful fossil,—such as a Pentacrinite or Echinus,—from its entombing chalk matrix, is similar to what an artist or sculptor experiences as he sees his

conception grow daily into visible reality ; while, to crown all, there are no sad regrets at the amusement having caused unnecessary suffering to the weaker objects in Creation, none of which have cause to lament that their brief day of life has been prematurely shortened.

The pursuit developed in me a habit of early rising ; it blessed me with the health which usually follows vigorous exercise in the open air ; and it made me acquainted with men of culture and refinement, who, in many instances, have grown to be firm and fast friends.

One word of caution I must give to young Collectors. There is a danger lest, in the greed of collecting, there should grow up a jealousy of those who have been more successful : and a watch must be set against the folly of fancying that, because you have fortunately discovered a new fossil, you may assume airs of personal importance as if you were its creator. But these are weaknesses which belong to human nature, and are not peculiar to the study of this or any other science.

To be a happy and successful Student, one must be *humble* and *reverent* ; and if the inspection of this Collection should help one young man to find his pleasure, and to spend his spare time in this direction, rather than to waste it in billiards or idleness, it will not have been formed nor presented in vain.

I should be deficient in due recognition of kind and

patient assistance, if I omitted to thank (for the aid rendered in the nomenclature and arrangement of this Catalogue) my friend, WILLIAM BOYD DAWKINS, ESQ., F.G.S., the Professor of Owen's College, Manchester, whose position is a proof of what may be done by any one who can combine high personal character with persevering and intelligent effort. Without his aid the Catalogue could not have attained its present form and accuracy.

HENRY WILLETT.

Arnold House,

Brighton,

January, 1871.

NOTICE.

The Fossils are arranged according to the System laid down in PROFESSOR OWEN'S "Palæontology."

The following Abridgements have been used throughout :—

- u. c., upper chalk.
- m. c., middle chalk.
- l. c., lower chalk.
- c. m., chalk marl.

Underneath the Table Cases are specimens of the existing Species, to illustrate the affinities of their fossil analogues.

In Case 12 there is a series of Minerals from the Chalk, and a small collection of the objects around which Flint is generally accumulated.



CATALOGUE

OF

CRETACEOUS FOSSILS.

Case 1.

TORTOISES AND TURTLES.

Province—Vertebrata.

Class—Reptilia.

Order—Chelonia.

Character—Trunk ribs broad, flat, united by sutures, and forming with the vertebræ and sternum a stout bony case, into which the head, tail, and limbs can usually be withdrawn; no teeth; external nostril single (Owen).

Range—From the Portlandian epoch to the present day.

- 1 Chelone c. m., Clayton
Sp. foss. marine turtle; fragment of scapulo-clavicle, carapace, and rib.
- 2 Chelone c. m., Clayton
Sp. foss. marine turtle; scapulo-clavicle.
- 3 Chelone l. c., Maidstone Taylor Coll.
Sp. foss. marine turtle; fragment of carapace.
- 4 Chelone c. m., Clayton
Sp. foss. marine turtle; median plates of carapace.
- 5 Chelone c. m., Clayton
Sp. foss. marine turtle; anterior portion of plastron.

- 6 *Chelone* c. m., *Clayton*
 Sp. foss. marine turtle ; vertebra.
- 7 *Chelone*
 Sp. foss. marine turtle ; ilium, hip-bone.
- 8 *Chelone*
 Sp. foss. marine turtle ; lower mandible.

LIZARDS.

Order—Lacertilia.

Character—Vertebræ, with centra hollow in front, and with a single transverse process on each side: ribs with one head only; sacral vertebræ not more than two; external nostrils two (Owen.)

Range—From the Triassic Age to the present day.

- 9 *Coniosaurus crassidens* (Owen) c. m., *Clayton*
 Sp. foss. thick-toothed lizard ; right ramus of lower jaw, with vertebræ ; type specimen.
- 10 *Coniosaurus crassidens* (Owen) m. c., *Falmer*
 Sp. foss. thick-toothed lizard ; vertebræ.
- 11 *Coniosaurus crassidens* (Owen) c. m., *Clayton*
 Sp. foss. thick-toothed lizard ; twelve consecutive dorsal vertebræ ; type of order.
- 12 *Mosasaurus gracilis* (Owen) u. c., *Offham*
 Sp. foss. slender-tooth marine lizard ; part of lower jaw, with teeth ; type of order.
- 13 *Mosasaurus gracilis* (Owen) u. c., *Offham*
 Sp. foss. slender-toothed marine lizard ; body of lumbar vertebra ; type of order.
- 14 *Mosasaurus gracilis* (Owen) u. c., *Offham*
 Sp. foss. slender-toothed marine lizard ; fragments of vertebræ, one of which, a lumbar vertebra, is a type of order.
- 15 l. c., *Southeram*
 New sp. foss. marine reptile ; fragment of dorsal vertebra ; closely allied in its form to the preceding.

- 16 l. c., *Clayton*
 Sp. foss. marine reptile ; coracoid bone.
- 17 *Leidon anceps* (Owen) u. c., *Brighton*
 Sp. foss. smooth-toothed giant lizard ; type tooth of order.
- 18 *Leidon anseps* (Owen) u. c., *Norwich*
 Sp. foss. smooth-toothed giant lizard ; teeth.

WINGED LIZARDS.

Order—Pterosauria.

Character—The two forelegs adapted for flight, by the elongation of the antibrachium and fifth digit ; vertebræ with centra hollowed in front ; cervicals not more than eight ; sacrum small ; head large ; jaws long, and armed with teeth ; bones hollow, and traversed by air as in birds (Owen).

Range—From Lias to Chalk.

- 19 *Pterodactylus Cuvieri* (?) c. m., *Newtimber*
 Sp. foss. gigantic flying reptile ; portion of shaft of radius.
- 20 *Pterodactylus Cuvieri* (?) c. m., *Newtimber*
 Sp. foss. gigantic flying reptile ; portion of wing-bone, showing the pneumatic foramen for the admission of hot-air into the cavity of the bone.
- 21 *Pterodactylus Cuvieri* (?) c. m., *Newtimber*
 Sp. foss. gigantic flying reptile ; fragment of bone, shewing the dense texture and thinness of the bone.

FINNED LIZARDS.

Order—Sauropterygia (Owen).

Character—Teeth simple, in distinct sockets of premaxillary and premandibular bones ; maxillaries larger than premaxillaries ; limbs adapted for swimming, and possessed of five digits only.

Range—From Trias to Chalk.

- 22 *Polyptychodon interruptus* (Owen) m. c., *Lewes*
 Sp. foss. great marine reptile, with folds on its teeth.

- 23 *Polyptychodon interruptus* (Owen)
Sp. foss. great marine reptile, with folds on its teeth ; fragments of three teeth.
- 24 *Polyptychodon interruptus* (Owen) m. c., *Falmer*
Sp. foss. great marine reptile, with folds on its teeth ; tooth of enormous size.
- 25 *Polyptychodon interruptus* (Owen) l. c., *Glynde*
Sp. foss. tooth different in many respects from the preceding.
- 26 *Polyptychodon interruptus* (Owen) l. c., *Glynde*
Sp. foss. tooth.
- 27 *Polyptychodon continuus* (Owen) l. c., *Houghton Pit*
Sp. foss. great marine reptile, with folds on its teeth ; a tooth.
- 28 *Plesiosaurus* l. c., *Southeram, Lewes*
Sp. foss. long-necked marine lizard ; vertebra.
- 29 *Plesiosaurus* l. c., *Southeram, Lewes*
Sp. foss. long-necked marine lizard ; vertebra.
- 30 *Plesiosaurus* figured by Prof. (Owen) m. c., *Sedlescomb*
Sp. foss. long-necked marine lizard ; tooth.
- 31 *Plesiosaurus* (?) m. c., *Malling*
Sp. foss. long-necked marine lizard ; fragment of bone.
- 32 *Plesiosaurus* (?) l. c., *Clayton*
Sp. foss. long-necked marine lizard ; fragment of bone.

FISH-FINNED REPTILES.

Order—Ichthyopterygia.

Character—Two nostrils in front of the orbits, which are very large, and contain sclerotic plates ; limbs natatory, with more than five digits ; teeth implanted in a common alveolar groove.

Range—From Trias to Chalk.

- 33 *Ichthyosaurus campylodon* (Owen) l. c., *Dover, Kent*
Short-necked marine lizard ; teeth.

- 34 *Ichthyosaurus campylodon* (Owen) l. c., *Dover*
Short-necked marine lizard ; teeth.
- 35 *Ichthyosaurus campylodon* (Owen) l. c., *Dover*
Short-necked marine lizard ; vertebra.
- 36 *Ichthyosaurus campylodon* (Owen) l. c., *Dover*
Short-necked marine lizard ; vertebræ and ribs.

Case 2a.

HARD-FINNED FISHES.

Order—Acanthopteri.

Character—Skeleton, ossified ; fins, with one or more of the first rays without joints, or inflexible ; ventral fins, generally beneath or in advance of the pectorals ; swim-bladder without air-duct.

Range—

- 37 *Pomognathus eupterygius* (Ag) l. c., *Southeram, Lewes*
Two fishes, preserved head to head, one of which has lost the latter half of its body ; type of order.
- 38 *Beryx radians* (Ag) c. m., *Glynde*
A perfect specimen ; the inflexible anterior spines of the dorsal fin and the posterior jointed ones are beautifully preserved, and are eminently typical of the order.
- 39 *Beryx radians* (Ag) c. m., *Southeram*
Anterior half of body.
- 40 *Beryx radians* (Ag)
Portion of the body, and cast.
- 41 *Beryx radians* (Ag) c. l., *Glynde*
Body.
- 42 *Beryx radians* (Ag) m. c., *Malling*
Head and spinal column.
- 43 *Beryx microcephalus* c. m., *Southeram*
The fish, docked of its tail.

- 44 *Beryx microcephalus* c. m., *Glynde*
Anterior portion of body.
- 45 *Beryx superbus* (Ag) Fragments of head and body.
- 46 *Beryx superbus* c. m., *Southeram*
Spinal column and scales.
- 47 *Beryx ornatus* (Ag) m. c., *Malling*
Body of fish, docked of its tail.
- 48 *Beryx ornatus* (Ag) m. c., *Malling*
Head, and portion of body.
- 49 *Beryx ornatus* (Ag) l. c., *Southeram*
Head.
- 50 *Beryx ornatus* (Ag) m. c., *Malling*
Portion of head, and spinal column.
- 51 *Beryx ornatus* (Ag) m. c., *Malling*
Anterior half of body.
- 52 *Beryx ornatus* (Ag) l. c., *Southeram*
Head, and portion of spinal column.
- 53 *Beryx ornatus* (Ag) Body, much contorted.

Case 2b.

- 54 *Beryx ornatus* (Ag) m. c., *Malling*
Portion of body.
- 55 *Beryx superbus* c. m., *Glynde*
Head, and anterior portion of body.
- 56 *Beryx ornatus* (Ag) (?) u. c., *Brighton*
Body and head.
- 57 *Beryx* u. c., *Brighton*
Portion of body.

- 58 *Berycopsis elegans* (Ag) c. m., *Clayton*
Anterior portion of body.
- 59 *Osmerus* (Ag) l. c., *Glynde*
Portion of body.
- 60 *Osmerus* (Ag) l. c., *Glynde*
Compressed head and body.
- 61 *Osmiroides crassus* (Dix) m. c., *Potter Coll., Malling*
Head, in a most wonderful state of preservation; type of order.
- 62 *Stenostoma pulchellum* u. c., *Brighton*
Body.
- 63 *Stenostoma pulchellum* (?) u. c., *Brighton*
- 64 *Homonotus dorsalis* (Ag) m. c., *Malling*
Head, and anterior portion of the body; type of order.
- 65 *Enchodus halocyon* (Ag) u. c., *Brighton*
Head, and portion of spinal column.
- 66 *Enchodus halocyon* (Ag) (?)
Tooth.
- 67 *Enchodus halocyon* (Ag) u. c., *Brighton*
Tooth.
- 68 *Enchodus halocyon* (Ag) l. c., *Glynde*
Tooth.
- 69 *Enchodus halocyon* (Ag) (?)
Tooth.
- 70 *Enchodus halocyon* (Ag) m. c., *Malling*
Fragments of skull.
- 71 c., *Southeram*
Tooth; sp.
- 72 c. m., *Glynde*
Lower jaw; sp.
- 73 c. m., *Clayton*
Lower jaw; sp.

- 74 l. c., *Glynde*
Lower jaw, and fragments of upper jaw and skull ; specimen.
- 75 l. c., *Glynde*
Lower jaws ; sp.
- 76 (Ag) l. c., *Glynde*
Lower jaws ; sp.
- 77 l. c., *Clayton*
Head ; sp.
- 78 c. m., *Clayton*
Jaw ; sp.
- 79 *Tomognathus mordax* (Ag) l. c., *Clayton*
Head.
- 80 *Tomognathus mordax* (Ag) c. m., *Southeram*
Head.
- 81 *Tomognathus leiodon* (Ag) c. m., *Clayton*.
Head.
- 82 *Saurocephalus* c. m., *Glynde*
Rostrum.
- 83 *Saurocephalus striatus* (Ag) c. m., *Glynde*
Left lower jaw.
- 84 *Saurocephalus lanciformis* (Ag) c. m., *Newtimber*
Tooth.
- 85 *Saurocephalus striatus* (Ag) c. m., *Newtimber*
Tooth.
- 86 *Saurocephalus lanciformis* (Ag) c. m., *Glynde*
Tooth.
- 87 *Saurocephalus lanciformis* (Ag) c. m., *Clayton*
Tooth.
- 88 *Saurocephalus striatus* (Ag) c. m., *Clayton*
Lower jaw ; type of order.

Case 2c.

- 89 *Saurocephalus lanciformis* (Ag) c. m., *Newtimber*
Tooth.
- 90 *Saurocephalus lanciformis* (Ag) c. m., *Malling*
Left vomer.
- 91 *Belonostomus cinctus* (Ag) m. c., *Malling*
Lower jaw ; type of order.
- 92 *Belonostomus cinctus* (Ag) u. c., *Brighton*
Left ramus.
- 93 *Belonostomus cinctus* (Ag) l. c., *Southeram*
Left lower jaw ; type of order.
- 94 m. c., *Malling*
Left ramus, and bones of the head ; sp.
- 95 *Hypsodon Lewisiensis* (Ag) c. m., *Glynde*
Lower jaws.
- 96 *Hypsodon Lewisiensis* (Ag) m. c., *Offham*
Vertebræ.
- 97 *Hypsodon Lewisiensis* (Ag) l. c., *Burham*
Left dentary.
- 98 *Cœlorhynchus cretaciæ* (Ag) c. m., *Clayton*
Portion of rostrum.
- 99 *Cœlorhynchus cretaceus* (Ag) c. m., *Clayton*
Portion of skull and rostrum.
- 100 m. c., *Houghton*
Crushed head of fish ; specimen.
- 101 *Tetrapterus minor* (Ag) c. m., *Amberley*
Two fragments of rostrum.
- 102 (Ag) c. m., *Amberley*
Caudal vertebræ.
- 103 *Enchodus halocyon* (Ag) c. m., *Clayton*
Fragments of skull and spinal column (species same as No. 70,
Case 2b.)

- 104 *Microdon occipitalis* (Ag) m. c., *Malling*
Skull, and anterior half of body ; type of order.
- 105 c. m., *Amberley*
Portion of spinal column ; specimen.
- 106 *Beryx* (?) u. c., *Brighton*
Anterior spines of dorsal fin.
- 107 u. c., *Brighton*
Intestine containing coprolite of carnivorous fish ; specimen.
- 108
Fragment of skull ; sp.
- 109 *Beryx* (?) c. m., *Clayton*
Fragment of spinal column.
- 110 c. m., *Amberley*
Fragment of spinal column ; sp.
- 110a c. m., *Amberley*
Fragment of spinal column ; sp.
- 111 *Mr. Taylor's Coll.*
Left lower jaw ; sp.
- 112 l. c., *Southeram*
Fossil ova ; sp.

FISHES CLAD IN ARMOUR.

Order—Ganoidei.

Character—Skeleton sometimes osseous, sometimes cartilaginous ; body covered with enamelled bones ; fins with a strong spine for the first ray.

Range—From Devonian to present day.

- 113 *Dercetis elongatus* (Ag) u. c., *Brighton*
Portion of head, and greater part of body.
- 114 *Dercetis elongatus* (Ag) l. c., *Southeram*
Portion of head, and greater part of body.

- 115 *Dercetis elongatus* (Ag) m. c., *Malling*
Head.
- 116 *Dercetis elongatus* (Ag) c. m., *Glynde*
Head.
- 117 *Dercetis elongatus* (Ag) c. m., *Glynde*
Portion of body.
- 118 *Lophiostomus Dixoni* (Ag) m. c., *Malling*
Scales, and fragments of jaw.
- 119 *Lepidotus punctatus* (Ag) *Kent*
Scale.
- 120 *Prionolepis angustus* (Ag) c. m., *Clayton*
Scale.
- 121 c. m. *Clayton*
Scale.
- 122 *Gyrodus cretaceous* (Ag) m. c., *Malling*
Portion of palate, with teeth; type of order.
- 123 *Gyrodus* (Ag) ch. m., *Glynde*
Remarkably fine maxillary, mandible, and vomer, with teeth.
- 124 *Gyrodus* (Ag) l. c., *Southeram*
Vomer.
- 125 *Calamopleurus Anglicus* (Dixon) c. m., *Amberley*
Scale.
- 126 *Calamopleurus Anglicus* (Dixon) l. c., *Southeram*
Scale.
- 127 *Calamopleurus Anglicus* (Dixon) l. c., *Southeram*
Scale.
- 128
Beautifully sculptured scale; sp.

Case 2d.

- 129 *Pycnodus parallelus* (Ag) l. c., *Southeram*
Fish, with teeth arranged in parallel lines ; portion of palate, bearing teeth.
- 130 *Pycnodus* c. m., *Glynde*
Portion of palate, with teeth.
- 131 *Microdon* sp. u. c., *Brighton*
Palate, with teeth ; type of order.
- 132 *Microdon* sp. m. c., *Malling*
Vomer, with teeth.
- 133 *Macropoma Mantellii* (Ag) m. c., *Malling*
Fish, with large gill covers. This remarkably fine specimen is perfect, with the exception of the dorsal fin and the spines of the tail. Underneath it, in the same block, is the skeleton of another fish, lying obliquely. See
- 134 *Macropoma Mantellii* (Ag) *Malling*
Head, and portion of the body ; latter half of body.
- 135 *Macropoma Mantellii* (Ag) *Malling*
View of internal portion of the posterior half of body. In the anterior part of this specimen the swim-bladder is preserved, and is shown by the chocolate-coloured scutiform mass underlying the cast of the spinal column.
- 136 *Macropoma Mantellii* (Ag) l. c., *Southeram*
Head.
- 137 *Macropoma Mantellii* (?) (Ag) l. c.,
Coprolites.
- 138 *Macropoma Mantellii* (?) (Ag)
Coprolites.
- 139 *Macropoma Mantellii* (?) (Ag)
Coprolites.

Case 2e.

BONY-JAWED FISHES.—CHIMÆEROIDS.

Order—Holocephali.

Character—Bony jaws, traversed and enclosed by dental plates ; skeleton cartilaginous ; body covered with hard enamelled granules ; fins generally with a strong spine for the first ray ; ventrals abdominal ; a single external gill aperture (Owen). These fish are represented by the chimera, the king of herrings, and by two species living now in the Australian and Chinese seas.

Range—From Oolitic Period to present day.

- | | | |
|-----|--|-------------------------|
| 140 | Ischyodus Agassizi
Suspensory spine. | c. m., <i>Amberley</i> |
| 141 | Dorsal spine ; sp. | c. m., <i>Amberley</i> |
| 142 | Dorsal spine ; sp. | c. m., <i>Glynde</i> |
| 143 | Edaphodon Mantellii (Buckland)
Right lower mandible. | c. m., <i>Glynde</i> |
| 144 | Edaphodon Mantellii (Buckland)
Lower mandible. | c. m., <i>Clayton</i> |
| 145 | Edaphodon Mantellii (Buckland)
Premaxillaries. | l. c., <i>Southeram</i> |
| 146 | Edaphodon Mantellii (Buckland)
Fragment of upper jaw. | c. m., <i>Glynde</i> |
| 147 | Edaphodon Mantellii (Buckland)
Right lower mandible. | c. m., <i>Clayton</i> |
| 148 | Edaphodon
Perfect mandible. | c. m., <i>Southeram</i> |

SHARKS AND RAYS.

Order—Plagiostomi.

Characters—Skeleton cartilaginous, or partially ossified; body covered with small enamelled granules; gill apertures, five or more; no swim bladder; intestine with a spiral valve.

Range—From Upper Silurian to present day.

- | | | |
|-----|--|-------------------------|
| 149 | <i>Plethodus expansus</i> (Dixon) | m. c., <i>Malling</i> |
| | Fragment of osseous representative of tooth; type of order. | |
| 150 | <i>Plethodus expansus</i> (Dixon) | c. m., <i>Clayton</i> |
| | Fragment of osseous representative of tooth. | |
| 151 | <i>Plethodus expansus</i> (Dixon) | c. m., <i>Newtimber</i> |
| | Fragment of osseous representation of tooth. | |
| 152 | <i>Plethodus expansus</i> (Dixon) | c. m., <i>Glynde</i> |
| | Perfect specimen of osseous representation of tooth. | |
| 153 | <i>Plethodus oblongus</i> (Dixon) | c. m., <i>Clayton</i> |
| | Tooth, or rather osseous representative; type of order. | |
| 154 | <i>Plethodus minor</i> (Dixon) | c. m., <i>Clayton</i> |
| | Osseous representative of tooth. | |
| 155 | <i>Chimeroid</i> | l. c., <i>Southeram</i> |
| | Skull; sp. | |
| 156 | <i>Chimeroid</i> | c. m., <i>Clayton</i> |
| | Portion of spine; sp. | |
| 157 | | c. m. <i>Southeram</i> |
| | Fossil spawn (?); sp. | |
| 158 | <i>Otodus appendiculatus</i> (Ag) | c. m., <i>Glynde</i> |
| | Shark, with two accessory cusps in each tooth; vertebræ and teeth. | |
| 159 | <i>Otodus appendiculatus</i> (Ag) | c. m. <i>Glynde</i> |
| | Vertebræ and teeth. | |
| 160 | <i>Otodus appendiculatus</i> (Ag) | <i>var. loc.</i> |
| | Teeth. | |
| 161 | <i>Otodus appendiculatus</i> (Ag) | |
| | Tooth imbedded in flint. | |

- 162 *Otodus superbus*
Teeth ; sp.
- 163
Vertebræ of shark ; sp. c. m., *Clayton*
- 164
Shark vertebra ; sp. l. c., *Amberley*

Case 2f.

- 165 *Oxyrhina crassidens* (Dixon) m. c., *Lewes*
Thick-toothed shark ; vertebræ and teeth.
- 166 *Oxyrhina crassidens* (Dixon) m. c., *Lewes*
Teeth.
- 167 *Lamna raphiodon* (Ag) m. c., *Lewes*
Teeth.
- 168 *Lamna acuminata* (Ag) m. c., *Lewes*
Tooth.
- 169 c. m.,
Vertebræ series ; type of order.
- 170 *Acrodus* (allied to) *Norwick*
Tooth ; sp.
- 171
Tooth ; sp.
- 172
Tooth ; sp.
- 173
Tooth ; sp.
- 174
Tooth ; sp.
- 175
Tooth ; sp.
- 176
Tooth ; sp.

- 177 *Corax falcatus* (Ag) u. c., *Brighton*
Teeth.
- 178 *Notidanus microdon* (Ag) c. m., *Glynde*
Teeth.
- 179 u. c., *Brighton & Clayton*
Portion of jaw, covered with shagreen ; sp.
- 180 c. m., *Amberley*
Vertebræ covered with shagreen ; specimen.
- 181 *Cestracion canaliculatus* (Ag) u. c., *Brighton*
Teeth, and shagreen.
- 182 *Cestracion canaliculatus* (Ag)
This valuable specimen correlates the teeth, spine, and vertebræ, which had been assigned to three distinct species, and shows that they really belong to one and the same animal, the greater part of the skeleton underlying the tail of *Macropoma Mantellii*, No. 133. The teeth and shagreen of the jaws are visible under the tail of the above-mentioned fish, while about the middle of the chain of vertebræ the dorsal spine is preserved in its normal position.
- 183 Sp. c. m., *Clayton*
Head, with shagreen and spinigerous granules and teeth ; remarkably fine specimen.

Case 2g.

- 184 *Ptychodus decurrens* (Ag) (*fig. Dixon*) l. c., *Southeram*
Teeth, in their natural position, cemented together with peroxide of iron ; type of order.
- 185 *Ptychodus decurrens* (Ag) c. m., *var.*
Teeth.
- 186 *Ptychodus latissimus* (Ag) m. c., *Malling*
Fossil shark, allied to that of Port Jackson ; palate and teeth ; the teeth are remarkable for their beauty, and for the power which the ridges give them of seizing and crushing shells.
- 187 *Ptychodus latissimus* (Ag) u. c., *Brighton*
Worn out tooth.

- 188 *Ptychodus latissimus* (Ag) (?)
Perfect tooth.
- 189 *Ptychodus superbus* (Ag) c. m., *Clayton*
Rays of fin.
- 190 *Ptychodus superbus* m. c., *Malling*
Rays of fin.
- 191 *Ptychodus superbus* l. c., *Southeram*
Rays of fin.
- 192 *Ptychodus superbus* c. m., *Clayton*
Rays of fin.
- 193 *Ptychodus superbus* l. c., *Southeram*
Rays of fin.
- 194 *Ptychodus latissimus* (Ag) u. c., *Malling*
Most magnificent series of teeth, 217 in number.

Case 2h.

- 195 *Ptychodus latissimus* (Ag)
Cast of tooth found in Suffolk; the original is in Mr. Wetherall's Collection.
- 196 *Ptychodus latissimus* (?) u. c., *Kent*
Tooth.
- 196a *Ptychodus* (Ag) u. c., *Brighton*
Teeth.
- 197 *Ptychodus mammillaris* (Ag) m. c., *Malling*
Group of teeth.
- 198 *Ptychodus mammillaris* (Ag) *Warminster*
Group of teeth.
- 199 *Ptychodus mammillaris* (?) c. m., *Glynde*
c, m., *Sedlescombe*
- 200 *Ptychodus decurrens*.

- | | | |
|-----|--|-------------------------|
| 201 | Ptychodus | m. c., <i>Malling</i> |
| | Rays of fin. | |
| 202 | Ptychodus | c. m., <i>Clayton</i> |
| | Rays of fin, with vertebrae ; type of order. | |
| 203 | Ptychodus | c. m., <i>Glynde</i> |
| | Rays of fin. | |
| 204 | Ptychodus polygyrus (Ag) | u. c., <i>Charlton</i> |
| | Tooth. | |
| 205 | Ptychodus rugosus (Ag) | u. c., <i>Chalton</i> |
| | Teeth. | |
| 206 | Ptychodus Altior (Ag) | u. c., |
| | Teeth. | |
| 207 | Ptychodus depressus (Dix) | u. c., |
| | Teeth. | |
| 208 | Acrodus cretaceus (Eg) | c. m., <i>Southeram</i> |
| | Tooth. | |
| 209 | Acrodus Illingworthii (Eg) | c. m., <i>Southeram</i> |
| | Group of teeth ; type of order. | |
| 210 | Antodus Agassizi (Dix) | c. m., <i>Glynde</i> |
| | Tooth ; type of order. | |

Wall Case 8.

SHELL FISH.

Province—Mollusca.

Class—Cephalopoda.

Order—Tetrabranchiata.

Character—Branchiæ, or gills four.

Range—From Upper Cambrian to present day.

- | | | |
|---|---------------------------------|-----------------------|
| 1 | Ammonites Rhotomagensis (Sharp) | c. m., <i>Clayton</i> |
| 2 | Ammonites Rhotomagensis (Sharp) | c. m., <i>Clayton</i> |
| 3 | Ammonites Rhotomagensis (Sharp) | c. m., <i>Clayton</i> |

- | | | |
|----|--|--------------------|
| 4 | Ammonites Rhotomagensis (Sharp) | c. m., Clayton |
| 5 | Ammonites Rhotomagensis (Sharp) | c. m., Clayton |
| 6 | Ammonites Rhotomagensis (Sharp) | c. m., Clayton |
| 7 | Ammonites Rhotomagensis (Sharp) | c. m., Clayton |
| 8 | Ammonites Rhotomagensis (Sharp) | c. m., Clayton |
| 9 | Ammonites Rhotomagensis (Sharp) | c. m., Clayton |
| 10 | Ammonites Rhotomagensis (Sharp) | c. m., Clayton |
| 11 | Ammonites Rhotomagensis (Sharp) | c. m., Clayton |
| 12 | Ammonites Rhotomagensis (Sharp) | c. m., Clayton |
| | Containing a univalve shell. | |
| 13 | Ammonites Austeni (Sharp) | c. m., Clayton |
| | Type of order. | |
| 14 | Ammonites Wolgari (Sharp) | c. m., Clayton |
| | Type of order. | |
| 15 | Ammonites Wolgari (Sharp) | c. m., Clayton |
| | Cast. | |
| 16 | Ammonites falcatus (Sharp) | c. m., Clayton |
| | Grey chalk of Clayton tunnel; type of order. | |
| 17 | Ammonites falcatus (Sharp) | c. m., Clayton |
| 18 | Ammonites varians (Sharp) | c. m., Clayton |
| 19 | Ammonites Rhotomagensis (Sharp) | m. c., Lewes |
| 20 | Ammonites Coupei (Sharp) | m. c., Lewes |
| 21 | Ammonites Coupei (Sharp) | m. c., Lewes |
| 22 | Ammonites Coupei (Sharp) | m. c., Lewes |
| 23 | Ammonites | |
| 24 | Ammonites | |
| 25 | Ammonites navicularis (Sharp) | |
| 26 | Ammonites navicularis (Sharp) | |
| 27 | Ammonites sp. | |
| 28 | Ammonites sp. | m. c., Sedlescombe |
| 29 | Ammonites sp. | |

- 30 *Ammonites navicularis* (Sharp)
- 31 *Ammonites varians* (?)
- 32 *Ammonites* sp.
- 33 *Ammonites* sp.
- 34 *Ammonites* sp.
- 35 *Ammonites goupillianus* (Sharp); also *A. Rhotomagensis*
- 36 *Ammonites* sp.
- 37 *Ammonites falcatus* (?)

Wall Case 9.

- 38 *Ammonites Lewisiensis* u. c., *Rottingdean*
 Fragment of enormous shell, showing the ramifications of the partition walls of the chambers.
- 39 *Ammonites Lewisiensis* l. c., *Clayton*
 Smaller specimen of the same species as 38, showing the ramifications of the partition walls in a better state of preservation.
- 40 *Ammonites Lewisiensis* m. c., *Malling*
- 41 *Ammonites* sp. m. c., *Malling*
- 42 *Ammonites* sp. m. c., *Malling*
- 43 *Ammonites catinus*

Case 8.

- 44 *Nautilus Fleurisianus* c. m., *Clayton*
- 45 *Nautilus lævigatus* (Sharp) m. c., *Lewes*
- 46 *Nautilus elegans* (Sharp) m. c., *Lewes*
 Section showing partitions.
- 47 *Nautilus elegans* (Sharp) c. m., *Clayton*
- 48 *Nautilus elegans* (Sharp) c. m., *Clayton*
- 49 *Nautilus elegans* (Sharp) c. m., *Clayton*

50	<i>Nautilus Deslongchampsianus</i> (d'Orb)	c. m., <i>Clayton</i>
51	<i>Nautilus</i> sp. Young.	c. m., <i>Clayton</i>
52	<i>Nautilus expansus</i> (Sharp)	c. m., <i>Clayton</i>
53	<i>Nautilus</i> sp.	c. m., <i>Clayton</i>
54	<i>Nautilus</i> sp.	c. m., <i>Clayton</i>
55	<i>Turrilites Mantellii</i> (Sharp)	c. m., <i>Clayton</i>
56	<i>Turrilites Mantellii</i> (?) (Sharp)	c. m., <i>Clayton</i>
57	<i>Turrilites tuberculatus</i> (Sharp)	c. m., <i>Clayton</i>
58	<i>Turrilites tuberculatus</i> (Sharp)	c. m., <i>Clayton</i>
59	<i>Turrilites tuberculatus</i> (Sharp)	c. m., <i>Clayton</i>
60	<i>Turrilites Bergeri</i> (Sharp)	c. m., <i>Clayton</i>
61	<i>Turrilites costatus</i> (Sharp)	c. m., <i>Hamsey</i>
62	<i>Turrilites costatus</i> (Sharp)	c. m., <i>Hamsey</i>
63	<i>Turrilites costatus</i> (Sharp)	
64	<i>Turrilites costatus</i> (Sharp)	
65	<i>Turrilites costatus</i> (Sharp)	
66	<i>Turrilites Scheuchzerianus</i> (Sharp)	
67	<i>Turrilites Scheuchzerianus</i> (Sharp)	c. m., <i>Hamsey</i>
68	<i>Turrilites</i> sp.	
69	<i>Turrilites</i> sp.	
70	<i>Scaphites striatus</i> (Mant)	c. m., <i>Clayton</i>
71	<i>Scaphites striatus</i> (Mant)	c. m., <i>Clayton</i>
72	<i>Scaphites striatus</i> (Mant)	c. m., <i>Clayton</i>
73	<i>Scaphites striatus</i> (Mant)	c. m., <i>Clayton</i>
74	<i>Scaphites striatus</i> (Mant)	c. m., <i>Clayton</i>
75	<i>Scaphites striatus</i> (Mant)	c. m., <i>Clayton</i>
76	<i>Scaphites costatus</i> (Mant)	c. m., <i>Clayton</i>
77	<i>Scaphites costatus</i> (Mant)	c. m., <i>Clayton</i>
78	<i>Scaphites costatus</i> (Mant)	c. m., <i>Clayton</i>

- 79 *Hamites* (?) c. m., *Clayton*
Probably a *Nautilus Deslongchampsianus* crushed.
- 80 *Hamites* (?) c. m., *Clayton*
Probably *Ammonites Navicularis* crushed.
- 81 *Hamites* (?) c. m., *Clayton*
Probably *A. Navicularis* crushed.
- 82 *Hamites attenuatus* (Buck) c. m., *Clayton*
- 83 *Hamites attenuatus* (?) (Mant) } c. m., *Clayton*
Angustus attenuatus (Dixon) }
- 84 *Hamites attenuatus* (?) (Mant) c. m., *Clayton*
- 85 *Hamites attenuatus* (?) (Mant) c. m., *Clayton*
- 86 *Hamites attenuatus* (?) (Mant) c. m., *Clayton*
- 87 *Hamites attenuatus* (?) (Mant) c. m., *Clayton*
- 88 *Hamites attenuatus* (?) (Mant) c. m., *Clayton*
- 89 *Hamites attenuatus* (?) (Mant) c. m., *Clayton*
- 90 *Ancyloceras* sp. c. m., *Clayton*
- 91 *Bacculites Faujasii* c. m., *Clayton*
- 92 *Bacculites bacculoides* (Mantel) c. m., *Clayton*
- 93 *Bacculites Faujasii* c. m., *Clayton*
- 94 *Bacculites Faujasii* c. m., *Clayton*
- 95 *Bacculites Faujasii* c. m., *Clayton*
- 96 *Bacculites Faujasii* c. m., *Clayton*
- 97 *Bacculites Faujasii* c. m., *Clayton*
- 98 *Bacculites Faujasii* c. m., *Clayton*
- 99 *Bacculites Faujisii* c. m., *Clayton*
- 100 *Bacculites* sp. c. m., *Clayton*
- 101 *Bacculites* (?) c. m., *Clayton*
Chamber of.
- 102 *Belemnitella mucronata* (d'Orb) c. m., *Clayton*
- 103 *Belemnitella mucronata* (d'Orb) c. m., *Clayton*
- 104 *Belemnitella mucronata* (d'Orb) c. m., *Clayton*

105	<i>Belemnitella mucronata</i> (d'Orb)	u. c., <i>Brighton</i>
106	<i>Belemnitella mucronata</i> (d'Orb)	u. c., <i>Brighton</i>
107	<i>Belemnitella mucronata</i> (d'Orb)	u. c., <i>Brighton</i>
108	<i>Belemnitella mucronata</i> (d'Orb)	u. c., <i>Brighton</i>
109	<i>Belemnitella plena</i> (Sharp)	c. m., <i>Newtimber</i>
110	<i>Belemnitella</i>	c. m., <i>Newtimber</i>
111	<i>Belemnitella Baudouini</i> (Sharp)	c. m., <i>Newtimber</i>
112	<i>Belemnitella quadrata</i> (Sharp)	c. m., <i>Newtimber</i>
113	<i>Belemnitella</i> sp. Lanceolata.	c. m., <i>Newtimber</i>
114	<i>Belemnitella</i> sp.	c. m., <i>Newtimber</i>
115	<i>Belemnitella</i> sp.	c. m., <i>Newtimber</i>
116	<i>Belemnitella</i> sp. (?)	u. c., <i>Brighton</i>
117	<i>Rhyncolites</i> sp. Beak of cuttle-fish or other cephalopod.	
118	<i>Rhyncolites</i> sp.	c. m., <i>Clayton</i>
119	<i>Rhyncolites</i> sp.	c. m., <i>Clayton</i>

Case 9.

Province—Mollusca.

Class—Gasteropoda.

120	<i>Dentalium difforme</i> (Dixon)	c. m., <i>Clayton</i>
121	<i>Dentalium</i> , cast	m. c., <i>Malling</i>
122	<i>Rostellaria Parkinsoni</i>	c. m., <i>Newtimber</i>
123	<i>Aporrhais stenopterus</i> (Dixon)	c. m., <i>Clayton</i>
124	<i>Pterocera</i>	c. m., <i>Clayton</i>
125	<i>Pterocera</i>	l. c., <i>Glynde</i>
126	<i>Pterocera</i>	c. m., <i>Clayton Tunnel</i>
127	<i>Pterocera</i>	c. m., <i>Clayton Tunnel</i>

128	Pterocera	c. m., <i>Clayton Tunnel</i>
129	Pterocera	c. m., <i>Clayton Tunnel</i>
130	Rostellaria Dupiniana (d'Orb)	c. m., <i>Clayton Tunnel</i>
131	Cassidaria inserta (Dixon)	c. m., <i>Newtimber</i>
	Dolium nodosum	
	Type of order.	
132	Cerithium (?)	u. c., <i>Malling</i>
133	Cerithium (?)	u. c., <i>Malling</i>
134	Cerithium ornatum	u. c., <i>Malling</i>
135	Scalaria compacta (Dixon)	c. m., <i>Clayton Tunnel</i>
136	Solarium ornatum (Fitton)	c. m., <i>Clayton Tunnel</i>
137	Solarium catenatum (Dixon)	c. m., <i>Glynde</i>
138	Solarium ornatissimum (?)	c., m., <i>Clayton</i>
139	Solarium Martinianum (?) (d'Orb)	c. m., <i>Clayton</i>
140	Solarium dentatum (d'Orb)	c. m., <i>Clayton</i>
141	Solarium dentatum (?)	c. m., <i>Clayton</i>
142	Cirrhus, cast	c. m., <i>Clayton</i>
143	Avellana incrassata (d'Orb)	c. m., <i>Clayton</i>
144	(?)	c. m., <i>Clayton</i>
145	Turritella (?)	c. m., <i>Clayton</i>
146	(?)	c. m., <i>Clayton</i>
147	(?)	c. m., <i>Shul</i>
148	Avellana (?)	
149	Turritella (?)	m. c., <i>Malling</i>
150	(?) Trochus	c. m., <i>Glynde</i>
151	(?)	c. m., <i>Clayton</i>
152	Trochus gibbula	c. m., <i>Clayton</i>
153	Turbo	c. m., <i>Clayton</i>
154	Turbo	c. m., <i>Clayton</i>
155	(?)	c. m., <i>Clayton</i>

- 156 *Turbo gemmatus* m. c., *Malling*
 157 *Turbo gemmatus* m. c., *Malling*
 158 *Turbo gemmatus* m. c., *Malling*
 In flint.
 159 *Trochus linearius* c. m., *Clayton Tunnel*
 160 *Trochus linearius* c. m., *Clayton Tunnel*
 161 (?) *Cirrhus* m. c., *Malling*
 162 *Pleurotomaria reticulata* c. m., *Clayton Tunnel*
 This shell is indistinguishable from those in the Oxfordian and
 Kimmeridgean zones.
 163 *Pleurotomaria Cassiniana* (?) (d'Orb) c. m., *Clayton Tnl.*
 164 *Pleurotomaria* m. c., *Malling*
 165 *Pleurotomaria perspectiva* m. c., *Malling*
 166 *Pleurotomaria perspectiva* c. m., *Newtimber*
 167 *Pleurotomaria perspectiva* c. m., *Southeram*
 168 *Pleurotomaria perspectiva* c. m., *Clayton*
 169 *Pleurotomaria perspectiva* u. c., *Brighton*
 170 *Pleurotomaria perspectiva* u. c., *Brighton*
 171 *Pleurotomaria perspectiva* c. m., *Clayton*
 172 *Pleurotomaria perspectiva* m. c., *Malling*
 173 *Pleurotomaria perspectiva* c., *Wilts*
 174 *Pleurotomaria perspectiva* *Wiltshire*
 175 *Pleurotomaria (cirrus) depressa* m. c., *Lewes*
 u. c., *Brighton*

Province—Mollusca.

Class—Lamellibranchiata.

- 176 *Teredo amphisbœna* (Dix) m. c., *Malling*
 177 *Teredo amphisbœna* (Dix) c. m., *Clayton*
 178 *Teredo amphisbœna* (Dix) m. c., *Malling*
 179 *Teredo amphisbœna* (Dix) u. c. *Brighton*

180	<i>Teredo amphisbœna</i> (Dix)	u. c., <i>Sotheram</i>
181	<i>Teredo amphisbœna</i> (Dix)	u. c., <i>Sotheram</i>
182	<i>Teredo amphisbœna</i> (Dix)	u. c., <i>Sotheram</i>
183	<i>Teredo amphisbœna</i> (Dix)	u. c., <i>Brighton</i>
184	<i>Teredo amphisbœna</i> (Dix)	c. m., <i>Glynde</i>
185	<i>Pholadomya</i>	c. m., <i>Sotheram, Lewes</i>
186	<i>Cardium Cenomanense</i>	c. m., <i>Clayton Tunnel</i>
187	<i>Cardium Cenomanense</i>	
188	<i>Cardium Cenomanense</i>	
189	(?)	
190	(?)	
191	(?)	
192	(?)	
194	(?)	
195	(?)	
196	(?)	
197	(?)	c. m., <i>Clayton Tunnel</i>

Case 5.

198	<i>Arca</i>	c. m., <i>Clayton Tunnel</i>
199	<i>Arca</i>	c. m., <i>Dover</i>
200	<i>Arca</i>	c. m., <i>Clayton</i>
201	<i>Arca</i>	c. m., <i>Clayton</i>
202	<i>Arca</i>	c. m., <i>Clayton</i>
203	<i>Isocardium</i>	c. m., <i>Clayton</i>
204	<i>Isocardium</i>	c. m., <i>Glynde</i>
205	(?)	c. m., <i>Clayton</i>
206	(?)	c. m., <i>Newtimber</i>
207	(?)	c. m., <i>Clayton</i>

208 (?)	c. m., <i>Clayton</i>
209 (?)	c. m., <i>Clayton</i>
210 <i>Corbis rotundata</i> (d'Orb)	c. m., <i>Clayton</i>
211 <i>Corbis cordiiformis</i>	c. m., <i>Clayton</i>
212 <i>Cyprina</i>	u. c., <i>Brighton</i>
213 <i>Lima spinosa</i>	<i>Localities varying</i>
214 <i>Lima Hooperi</i>	c. m., u. and l., <i>Clayton</i>
215 <i>Lima aspera</i>	u. c., <i>Brighton</i>
216 <i>Lima parallelum</i> (?) <i>intermedia</i> (?)	c. m., <i>Clayton</i>
217 <i>Lima</i> , fragment	c. m., <i>Clayton</i>
218 <i>Lima Royeriana</i> (?) (d'Orb)	c. m. <i>Glynde</i>
219 <i>Lima semisulcata</i> (Desh)	c. m., <i>Clayton</i>
220 <i>Spondylus fimbriatus</i> (<i>dianchora</i>)	u. c., <i>Brighton</i>
221 <i>Spondylus fimbriatus</i>	u. c., <i>Brighton</i>
222 <i>Spondylus fimbriatus</i>	c. m., <i>Glynde</i>
223 <i>Spondylus latus</i>	u. c., <i>Seaford</i>
224 <i>Spondylus latus</i>	u. c., <i>Brighton</i>
225 <i>Spondylus latus</i>	u. c., <i>Brighton</i>
226 <i>Spondylus Gibbosus</i>	u. c., <i>Brighton</i>
227 <i>Spondylus Gibbosus</i>	flint, <i>Brighton</i>
228 <i>Spondylus superbus</i>	u. c., <i>Seaford</i>
229 <i>Lima</i> (?) <i>granosa</i> (Dix) <i>plicatula</i> (?)	c. m., <i>Newtimber</i>
230 <i>Pecten æquicostatus</i> (d'Orb)	flint,
231 <i>Pecten æquicostatus</i> (d'Orb)	flint,
232 <i>Pecten æquicostatus</i> (d'Orb)	m. c., <i>Malling</i>
233 <i>Pecten quinquecostatus</i> (d'Orb)	m. c., <i>Malling</i>
234 <i>Pecten quinquecostatus</i> (d'Orb)	l. c., <i>Clayton</i>
235 <i>Pecten quinquecostatus</i> (d'Orb)	c. m., <i>Newtimber</i>
236 <i>Pecten quinquecostatus</i> (d'Orb)	c. m., <i>Newtimber</i>
237 <i>Pecten quinquecostatus</i> (d'Orb)	c. m., <i>Newtimber</i>

238	<i>Pecten quinquecostatus</i> (d'Orb)	c. m., <i>Newtimber</i>
239	<i>Pecten quinquecostatus</i> (d'Orb)	c. m., <i>Clayton</i>
240	<i>Pecten quinquecostatus</i> (d'Orb)	c. m., <i>Clayton</i>
241	<i>Pecten quinquecostatus</i> (d'Orb)	
242	<i>Pecten quinquecostatus</i> (d'Orb)	(?)
243	<i>Pecten nitida</i>	u. c., <i>Brighton</i>
244	<i>Pecten nitida</i> (Dix)	u. c., <i>Brighton</i>
245	<i>Pecten nitida</i> (?) (d'Orb)	u. c., <i>Brighton</i>
246	<i>Pecten nitida</i> (?) (d'Orb)	u. c., <i>Brighton</i>
247	<i>Pecten nitida</i> (?) (d'Orb)	u. c., <i>Brighton</i>
248	<i>Pecten nitida</i> (?) (d'Orb)	u. c., <i>Brighton</i>
249	<i>Pecten nitida</i> (?) (d'Orb)	u. c., <i>Brighton</i>
250	<i>Pecten nitida</i> (?) (d'Orb)	u. c., <i>Brighton</i>
251	<i>Pecten orbicularis</i> (laminosa) (Mant)	c. m., <i>Clayton</i>
252	<i>Pecten orbicularis</i>	c. m., <i>Clayton</i>
253	<i>Pecten orbicularis</i>	c. m., <i>Newtimber</i>
254	<i>Pecten orbicularis</i>	c. m., <i>Newtimber</i>
255	<i>Pecten orbicularis</i>	c. m., <i>Newtimber</i>
256	<i>Pecten nitida</i>	u. c., <i>Brighton</i>
257	<i>Pecten orbicularis</i>	c. m., <i>Glynde</i>
258	<i>Pecten orbicularis</i>	c. m., <i>Glynde</i>
259	<i>Pecten</i> (?)	c. m., <i>Glynde</i>
260	<i>Pecten nitida</i>	c. m., <i>Glynde</i>
261	<i>Pecten orbicularis</i>	c. m., <i>Glynde</i>
262	<i>Pecten nitida</i>	
263	<i>Pecten</i> (Mant)	c. m., <i>Clayton</i>
264	<i>Pecten</i>	(?)
265	<i>Pecten Dujardini</i>	m. c., <i>Houghton</i>
266	<i>Pecten</i> (?)	m. c., <i>Houghton</i>
267	<i>Pecten Dujardini</i>	m. c., <i>Houghton</i>

268 Pecten (?)	c. m., <i>Newtimber</i>
269 Pecten (?)	c. m., <i>Clayton</i>
270 Pecten	u. c., <i>Brighton</i>
271 Pecten Beaveri	c. m., <i>Clayton</i>
272 Pecten Beaveri	c. m., <i>Glynde</i>
273 Pecten Beaveri	c. m., <i>Glynde</i>
274 Pecten Beaveri	<i>Newtimber</i>
275 Pecten Beaveri	c. m., <i>Glynde</i>
276 Pecten Beaveri	c. m., <i>Glynde</i>
277 Pecten Beaveri	c. m., <i>Clayton</i>
278 Pecten Beaveri	(?)
279 Pecten Beaveri	(?)
280 Pecten Beaveri	(?)
281 Pecten Beaveri	(?)
282 Pecten Beaveri	c. m., <i>Clayton</i>
283 Pecten Beaveri	c. m., <i>Glynde</i>
284 Plicatula inflata	c. m., <i>Southeram</i>
285 Plicatula inflata	(?)
286 Plicatula inflata	(?)
287 Plicatula inflata	(?)
288 Dianchora lata	c. m., <i>Clayton</i>
289 Exogyra Rauliniana (ostrea) (d'Orb)	c. m., <i>Clayton</i>
290 Exogyra Rauliniana	c. m., <i>Clayton</i>
291 Exogyra Rauliniana	c. m., <i>Clayton</i>
292 Exogyra Rauliniana	c. c., <i>Seaford</i>
293 Exogyra Rauliniana	m. c., <i>Southeram</i>
294 Exogyra Rauliniana	c. m., <i>Clayton</i>
295 Exogyra Rauliniana	c. m., <i>Clayton</i>
296 Exogyra Rauliniana	c. m., <i>Clayton</i>

- 297 *Ostrea* (Oyster) u. c., *Brighton*
Spat.
- 298 *Ostrea* u. c., *Brighton*
Spat.
- 299 *Ostrea* u. c., *Brighton*
Young.
- 300 *Ostrea* c. m., *Clayton*
Young.
- 301 u. c., *Brighton*
- 302 *Ostrea* u. c., *Southeram*
Young ; the space between the valves is converted into flint.
- 303 *Ostrea* (?)
Young.
- 304 *Ostrea* u. c., *Brighton*
Young.
- 305 *Ostrea* m. c., *Lewes*
Young.
- 306 *Ostrea* c. m., *Amberley*
Young.
- 307 *Ostrea* m. c., *Lewes*
Young.
- 308 *Ostrea* m. c., *Lewes*
Young.
- 309 *Ostrea* u. c., *Brighton*
Young.
- 310 *Ostrea*
- 311 *Ostrea* c. m., *Clayton*
Young.
- 312 *Ostrea*
- 313 *Ostrea* m. c., *Lewes*
Young.

- 314 *Ostrea*
About two years old.
- 315 *Ostrea* m. c., *Lewes*
- 316 *Ostrea* m. c., *Lewes*
- 317 *Ostrea* m. c., *Lewes*
- 318 *Ostrea* m. c., *Lewes*
About three years old.
- 319 *Ostrea* m. c., *Lewes*
Three years old.
- 320 *Ostrea* m. c., *Lewes*
From three to four years old.
- 321 *Ostrea Coulonii* m. c., *Lewes*
- 322 *Ostrea* m. c., *Lewes*
- 323 *Ostrea*
- 324 *Ostrea vesicularis*
- 325 *Ostrea*
- 326 *Ostrea frons* c. m., *Dover*
- 327 *Ostrea frons* c. m., *Clayton*
- 328 *Ostrea carinata*
- 329 *Ostrea carinata* c. m., *Newtimber*
- 330 *Gryphæa columba*
- 331 *Gryphæa columba*

Case 6.

- 332 *Inoceramus concentricus*
- 332a *Inoceramus Brogniarti* m. c., *Malling*
Group of shells.
- 333 *Inoceramus Brogniarti* l. c., *Southeram*
- 334 *Inoceramus Brogniarti* l. c., *Southeram*
- 335 *Inoceramus Crispii* u c., *Brighton*

- 336 *Inoceramus Crispii* u. c., *Brighton*
 337 *Inoceramus Cuvieri* m. c. *Malling*
 338 *Inoceramus sulcatus* m. c., *Southeram*
 339 *Inoceramus Cuvieri* m. c., *Malling*
 340 *Inoceramus Cuvieri* m. c., *Southeram*
 341 *Inoceramus digitatus* u. c., *Brighton*
 342 *Inoceramus pinniformis*, N. S. u. c., *Brighton*
 343 *Inoceramus pinniformis*, N. S. u. c., *Brighton*
 Young.
 344 *Inoceramus Websteri* m. c., *Lewes*
 345 *Inoceramus mytiloides* *Warminster*
 346 *Inoceramus mytiloides* (?)
 347 *Inoceramus mytiloides* (?)
 Variety according to Mantell.
 348 *Inoceramus*
 Cast in flint.
 349 *Inoceramus*
 Cast in flint.
 350 *Inoceramus*
 Cast in chalk.
 351 *Inoceramus*
 Young.
 352 *Inoceramus* m. c., *Malling*
 Hinge of.
 353-4 *Inoceramus* m. c., *Malling*
 Right and left valves ; portion of hinge.
 355 *Inoceramus* flint,
 Cast of hinge.
 356 *Inoceramus* flint,
 Cast of hinge in flint.
 357 *Inoceramus* u. c., *Brighton*
 Portion of hinge.

- 358 *Inoceramus* u. c., *Brighton*
Fragment of shell.
- 359 *Inoceramus* flint, *Brighton*
Cast of shell, with cast of borings in flint.
- 360 *Inoceramus* flint, *Brighton*
Cast of shell, with cast of borings in flint.
- 361 *Inoceramus*
Cast of shell, with cast of borings in flint.
- 362 *Inoceramus* c. m., *Clayton*
- 363 *Inoceramus* (?)
Fragment of shell
- 364 *Inoceramus* (?)
Fragment of shell.
- 365 *Avicula pectinata* u. c., *Woolwich, Kent*
- 366 *Avicula pectinata* (?)
Cast.
- 367 *Avicula pectinata* c. m., *Clayton*
Cast.
- 368 *Pinna decussata* *Brighton*
Cast in flint.
- 369 *Pinna decussata* c. m., *Newtimber*
Both valves of shell.
- 370 *Gervillia* (?)
- 371 *Modiola quadrata* c. m., *Clayton*
- 372 *Anomia* c. m., *Clayton*
- 373 (?) c. m., *Clayton*
- 374 *Hippurites* c. m., *Folkestone*
- 375 *Hippurites Moretoni* m., c., *Malling*
Lower valve.
- 376 *Hippurites Moretoni* m. c., *Amberley*
Lower valve.

377 Sp.

Ashwell Cambs

378 Sp.

m. c., *Southeram***Case 6.***Province*—Mollusca.*Class*—Brachiopoda.1 *Terebratula bulla*

A series of specimens of various sizes.

2 *Rhynconella gracilis*3 *Terebratula*4 *Terebratula*5 *Rhynconella*6 *Terebratula* (?)7 *Rhynconella*8 *Crania Ignabergensis*

Belgian species.

9 *Crania Parisiensis*10 *Rhynconella latissima*11 *Rhynconella plicatilis*12 *Terebratulina gracilis*13 *Terebratulina striata***Case 3a.****CRUSTACEANS.***Province*—Articulata.*Class*—Crustacea.*Order*—Podophthalmata.*Character*—Articulated animals with eyes supported on stalks.1 *Enoplocytia Sussexiensis* (Mant) l. m., *Clayton*

Fossil cray-fish; body and tail perfect; type of order.

By the fracture of the matrix, the internal bone of the jaw is plainly visible.

- | | | |
|----|--|------------------------|
| 2 | <i>Enoploclytia Sussexiensis</i> (Mant) | c. m., <i>Clayton</i> |
| | Head, thorax, and claws. | |
| 3 | <i>Enoploclytia Sussexiensis</i> (Mant) | c. m., <i>Glynde</i> |
| | Claws. | |
| 4 | <i>Enoploclytia Sussexiensis</i> (Mant) | c. m., <i>Clayton</i> |
| | Fragment of claw. | |
| 5 | <i>Enoploclytia Sussexiensis</i> (Mant) | c. m., <i>Clayton</i> |
| | Secondary claw. | |
| 6 | <i>Enoploclytia Sussexiensis</i> (Mant) | c. m., <i>Clayton</i> |
| | Claw. | |
| 7 | <i>Enoploclytia Sussexiensis</i> (Mant) | c. m., <i>Glynde</i> |
| | Young individual; docked of its tail. | |
| 8 | <i>Enoploclytia Sussexiensis</i> (Mant) | c. m., <i>Glynde</i> |
| | Claw. | |
| 9 | <i>Enoploclytia Sussexiensis</i> (Mant) | c. m., <i>Glynde</i> |
| | Claw. | |
| 10 | <i>Enoploclytia Sussexiensis</i> (Mant) | c. m., <i>Glynde</i> |
| | Leg. | |
| 11 | <i>Enoploclytia Sussexiensis</i> (Mant) | c. m., <i>Glynde</i> |
| | Claw. | |
| 12 | <i>Enoploclytia Sussexiensis</i> (Mant) | c. m., <i>Glynde</i> |
| | Crushed superior plate of thorax. | |
| 13 | <i>Enoploclytia Leachii</i> (Mant) | u. c., <i>Brighton</i> |
| | Fossil craw-fish; two claws interlocked, showing the animal had been suddenly entombed and had convulsively clasped its claws. | |
| 14 | <i>Enoploclytia Leachii</i> (Mant) | u. c., <i>Brighton</i> |
| | Two claws. | |
| 15 | <i>Enoploclytia Leachii</i> (Mant) | u. c., <i>Brighton</i> |
| | Two claws, antenna, and a portion of the head and thorax. | |
| 16 | <i>Enoploclytia Leachii</i> (Mant) | u. c., <i>Brighton</i> |
| | Head, thorax, and two claws. | |

Case 3b.

- 17 *Enoploclytia Leachii* (Mant) u. c., *Brighton*
Two claws, legs, and portion of thorax and tail.
- 18 *Enoploclytia* sp.
Body and legs in one block of chalk ; two claws in another.
- 19 *Enoploclytia* sp. (? *Sussexiensis*) u. c., *Brighton*
Claw.
- 20 *Enoploclytia* (? *Sussexiensis*)
Two claws
- 21 *Enoploclytia Leachii* u. c.,
Tail.
- 22 *Mesostylus*
Fragment of claw.
- 23 Sp.
Fossil cray-fish, nearly perfect.
- 24 Sp.
Leg and claw of crustacean.
- 25 Sp.
Claw and foot jaws.
- 26 Sp.
Fragments.
- 27 *Mesostylus Faujasii* (Brong) c. m., *Clayton*
Fossil crab ; claw.
- 28-29 Sp.
Two fragments.
- 30 Sp. c. m., *Clayton Tunnel*
Fragment.
- 31 *Grapsus* (?) c. m., *Clayton*
Claw (?)

- 32 Sp. c. m., *Clayton Tunnel*
 Fragment.
- 33 *Mesostylus* (?) c. m., *Glynde*
 Superior portion of carapace of crab.
- 34 Sp. u. c., *Brighton*
 Fragment of crustacean.

Order—Cirripedia ; Family Lepadidæ.

Characters—Peduncle flexible, and provided with muscles ; scuta furnished only with an adductor vessel ; other valves, when present, not united into an immovable ring (Darwin).

- 35 *Scalpellum angustum* (Darwin) m. c., *Southeram*
Carina-zipidium (Dix)
(Geology and Fossils of Sussex, Table xxviii., fig. 9)
 One of valves.
- 36 *Scalpellum lineatum* (Darwin) l. c., *Southeram*
 Carina ; one of the valves.
- 37 *Scalpellum maximum* (Darwin) m. c., *Lewes*
 Carina ; one of the valves.
- 38 *Scalpellum maximum* (Darwin) m. c., *Malling*
 Scutum ; one of the valves.
- 39 *Pollicipes glaber* (Darwin) u. c., *Brighton*
 Turgum ; one of the valves.
- 40 *Loricula pulchella* m. c., *Malling*
 Ossicles.
- 41 *Loricula pulchella* (Sow)
 Two valves and ossicles of barnacle.

Case 4.

Province—Annulata.

Class—Annelida.

Order—Serpulacea.

1	<i>Serpula plexus</i> (Dix)	u. c., <i>Brighton</i>
2	<i>Serpula plexus</i> (Dix)	m. c., <i>Malling</i>
3	<i>Serpula annulata</i> (Dix)	c. m.,
4	<i>Serpula annulata</i> (Dix)	u. c., <i>Brighton</i>
5	<i>Serpula annulata</i> (Dix)	
6	<i>Serpula</i> sp.	m. c., <i>Lewes</i>
7	<i>Serpula</i> sp.	
8	<i>Serpula</i> sp.	l. c., <i>Southeram</i>
9	<i>Serpula</i> sp.	u. c., <i>Brighton</i>
10	<i>Serpula</i> sp.	u. c., <i>Brighton</i>
11	<i>Serpula</i> sp.	u. c., <i>Brighton</i>
12	<i>Serpula</i> sp.	u. c., <i>Brighton</i>
13	<i>Serpula</i> sp.	u. c., <i>Brighton</i>
14	<i>Serpula</i> sp.	u. c., <i>Brighton</i>

Case 3c.

Province—Annuloida.

Class—Echinodermata.

Order—Asteridea.

1	<i>Oreaster squamatus</i> (Forbes)	u. c., <i>Woolwich</i>
	Fossil star-fish ; type of order.	
2	<i>Oreaster bulbiferus</i> (Forbes)	u. c., <i>Woolwich</i>
3	<i>Oreaster pistilliformis</i>	u. c., <i>Seaford</i>
4	<i>Oreaster</i> sp.	u. c., <i>Seaford</i>

- | | |
|----------------------------------|------------------------------|
| 5 Oreaster sp. | u. c., <i>Brighton</i> |
| 6 Oreaster sp. | u. c., <i>Brighton</i> |
| 7 Ophiura | u. c., <i>Brighton</i> |
| 8 Goniaster Mosaicus (Forbes) | l. c., <i>Amberley</i> |
| 9 Goniaster Smithii (Forbes) | l. c., <i>Amberley</i> |
| 10 Goniaster Smithii (Forbes) | c. m., <i>Clayton Tunnel</i> |
| Type of order. | |
| 11 Goniaster Mosaicus (Forbes) | c. m., <i>Amberley</i> |
| A remarkably fine specimen. | |
| 12 Goniaster Mosaicus (Forbes) | c. m., <i>Amberley</i> |
| 13 Goniaster sp. | <i>Folkestone</i> |
| 14 Goniaster Parkinsoni | u. c., <i>Brighton</i> |
| 15 Goniaster compactus (Forbes) | m. c., |
| Type of order. | |
| Goniaster Combei (Dixon) | |
| 16 Goniaster Mantellii (Forbes) | m. c., <i>Lewes</i> |
| 17 Goniaster uncatus (Forbes) | u. c., <i>Woolwich</i> |
| 18 Goniaster uncatus (Forbes) | u. c., |
| 19 Goniaster uncatus (Forbes) | u. c., <i>Lewes</i> |
| 20 Goniaster Parkinsoni (Forbes) | u. c., <i>Lewes</i> |
| 21 Goniaster Hunteri (Forbes) | u. c., <i>Woolwich</i> |
| 22 Goniaster sp. | u. c., <i>Brighton</i> |
| 23 Goniaster sp. | u. c., <i>Brighton</i> |

Case 3f.

- | | |
|------------------------|------------------------|
| 24 Marsupites | u. c., <i>Brighton</i> |
| 25 Oreaster | u. c., <i>Seaford</i> |
| 26 Oreaster bulbiferus | |
| 27 Goniaster sp. | u. c., <i>Seaford</i> |

- 28 Oreaster
Casts of ossicles in flint. u. c., *Brighton*
- 29 Goniaster sp.
Cast of ossicles in flint. u. c., *Brighton*
- 30 Goniaster sp.
Ossicles imbedded in flint. u. c., *Brighton*
- 31 Oreaster
Fragment. u. c., *Seaford*
- 32 Ophiura serrata
Remarkably fine specimen, nearly perfect. l. c., *Folkestone*

Case 3d.

Order—Echinidea.

- 33 Cyphosoma variolaris (Desm) u. c., *Woolwich*
- 34 Cyphosoma variolaris (Desm) m. c., *Lewes*
- 35 Cyphosoma variolaris (Desm) m. c., *Lewes*
- 36 Cyphosoma variolaris (Desm) m. c., *Lewes*
- 37 Cyphosoma variolaris (Desm) u. c., *Woolwich*
- 38 Cyphosoma variolaris (Desm) m. c., *Lewes*
- 39 Cyphosoma variolaris (Desm) m. c., *Lewes*
- 40 Cyphosoma variolaris (Desm) u. c., *Woolwich*
- 41 Cyphosoma Milleri u. c., *Brighton*
- 42 Cyphosoma Milleri m. c., *Malling*
- 43 Cyphosoma (?) m. c., *Malling*
- 44 Cyphosoma (?) c. m., *Folkestone*
- 45 Cyphosoma (?) c. m., *Glynde*
- 46 Cyphosoma (?) c. m., *Glynde*
- 47 Cyphosoma (?) c. m., *Clayton*
- 48 Cyphosoma (?) m. c., *Lewes*

49 Cyphosoma (?)

Cast.

50 Cyphosoma (?)

Cast.

51 Salenia personata (Defr)

c. m., *Glyde*

52 Salenia scutifera (Defr)

u. c., *Seaford Cliff*

53 Salenia personata (Defr)

u. c., *Seaford Cliff*

54 Echinopsis pusillus

u. c., *Seaford Cliff*

55 Glypticus Koninckii

l. c., *Southeram*

56 (?)

u. c., *Woolwich*

57 (?)

m. c., *Malling*

58 (?)

m. c., *Malling*

59 (?)

m. c., *Malling*

60 Cidaris Bowerbankii (Forbes)

c. m., *Newtimber*

61 Cidaris Dixoni (Wright)

c. m., *Clayton*

Perfect spine ; type of order.

62 Cidaris (? Bowerbankii)

c. m., *Newtimber*

Spine, figured.

63 Cidaris subvesiculosa (d'Orb)

l. c., *Southeram*

64 Cidaris clavigera (Konig)

u. c., *Woolwich*

A remarkably fine specimen, with the spines attached.

65 Cidaris clavigera (Konig)

u. c., *Woolwich*

66 Cidaris Bowerbankii (Konig)

l. c., *Dover*

67 Cidaris clavigera (Konig)

Spine.

Cidaris sceptrifera

Test.

68 Cidaris clavigera

Spine.

69 Cidaris clavigera

Spine.

70 *Cidaris clavigera*

Spine.

71 *Cidaris clavigera*

Spine.

72 *Cidaris clavigera*

Spine.

Case 3e.

73 *Cidaris sceptrifera* (Mant)

u. c., *Woolwich*

74 *Cidaris sceptrifera* (Mant)

u. c., *Woolwich*

75 *Cidaris sceptrifera* (Mant)

u. c., *Woolwich*

76 *Cidaris sceptrifera* (Mant)

u. c., *Woolwich*

77 *Cidaris sceptrifera* (Mant)

u. c., *Woolwich*

78 *Cidaris sceptrifera* (Mant)

u. c., *Woolwich*

79 *Cidaris sceptrifera* (Mant)

u. c., *Woolwich*

80 *Cidaris sceptrifera* (Mant)

u. c., *Woolwich*

81 *Cidaris sceptrifera* (Mant)

u. c., *Woolwich*

82 *Cidaris dissimilis* (Forbes)

u. c., *Brighton*

83 *Cidaris perornata* (Forbes)

u. c., *Houghton*

Test. and spines.

84 *Cidaris dissimilis* (?) (Forbes)

m. c., *Malling*

Test. and spines.

85 *Cidaris perornata* (Forbes)

u. c., *Brighton*

Test. imbedded in flint.

86 *Cidaris* (?) (Forbes)

(?)

Spines.

87 *Cidaris perornata* (Forbes)

u. c., *Woolwich*

88 *Cidaris perornata* (Forbes)

Spines.

89 *Cidaris serrata* (Wright)

m. c., *Malling*

Test. and spines; type of order.

- 90 *Cidaris sulcata* l. c., *Southeram*
 Test. and spines.
- 91 *Cidaris hirudo* l. c., *Alfriston*
 Test. and spines.
- 92 *Cidaris sulcata* m. c., *Burpham*
- 93 *Cidaris* (probably *perornata*) *Brighton*
 Cast in flint.
- 94 *Cidaris* (?)
- 95 *Echinus granulosus* (Munster) m. c., *Malling*
- 96 *Galerites castanea* (Brong) u. c., *Brighton*
- 97 *Galerites subuculus* (Leske) l. c., *Glynde*
- 98 *Galerites cylindrica* (Lamark)
- 99 *Galerites cylindrica* (Lamark)
- 100 *Galerites cylindrica* (Lamark)
- 101 *Galerites cylindrica* (Lamark)
- 102 *Galerites cylindrica* (Lamark)
- 103 *Galerites cylindrica* (Lamark)
- 104 *Galerites cylindrica* (Lamark)
- 105 *Galerites cylindrica* (Lamark)
- 106 *Galerites* *Woolwich*

Case 4.

- 107 *Galerites* c. m., *Clayton*
 Group of tests.
- 108 *Galerites*
 Group of tests.
- 109 *Galerites subrotundus* m. c., *Lewes*
- 110 *Galerites* m. c., *Lewes*
- 111 *Galerites* *Lewes*
 Cast in flint.

- 112 *Galerites albogalerus* (Klein) m. c., *Malling*
 A series, showing variations in form.
- 113 *Galerites*
- 114 *Galerites*
- 115 *Galerites*
- 116 *Galerites*
- 117 *Galerites*
- 118 *Spatangus coranguinum*
 A series, showing various modifications of size and form.
- 119 *Ananchytes pallula* (Lamark)
- 120 *Ananchytes subglobosus* (Leske) l. c.,
- 121 *Ananchytes ovata*
 A series.

Case 3f.

Order—Crinoidea.

- 122 *Marsupites Milleri* u. c., *Burpham*
- 123 *Marsupites Milleri* u. c., *Burpham*
- 124 *Marsupites Milleri* u. c., *Burpham*
- 125 *Marsupites Milleri* u. c., *Burpham*
- 126 *Marsupites Milleri* u. c., *Burpham*
- 127 *Marsupites Milleri* u. c., *Burpham*
- 128 *Marsupites Milleri* u. c., *Burpham*
- 129 *Marsupites lævigatus* u. c., *Brighton*
 Very fine specimen, with the arms attached.
- 130 *Marsupites lævigatus* u. c., *Burpham*
- 131 *Marsupites lævigatus* u. c., *Burpham*
- 132 *Marsupites lævigatus* u. c., *Burpham*
- 133 *Marsupites lævigatus* u. c., *Brighton*

- 134 *Marsupites* u. c., *Brighton*
Vase of arms.
- 135 *Pentacrinus* m. c., *Malling*
New species, figured by Dixon; this unique specimen shows nearly the whole of the head, and a great part of the stem.
- 136 *Pentacrinus* m. c., *Malling*
Portion of stem.
- 137 *Pentacrinus* m. c., *Houghton*
Portion of stem.
- 138 *Pentacrinus* m. c., *Houghton*
Portion of stem.
- 139 *Pentacrinus* m. c., *Houghton*
Portion of stem.
- 140 *Pentacrinus* *Dr. Mantell's Coll.*
Portion of stem.
- 141 *Pentacrinus* c. m., *Clayton*
Portion of stem.
- 142 *Pentacrinus* c. m., *Glynde*
Portion of stem.
- 143 *Pentacrinus* m. c., *Houghton*
Portion of stem.
- 144 *Pentacrinus* m. c., *Houghton*
Crushed mass of ossicles of the head.
- 145 *Pentacrinus* m. c., *Houghton*
Crushed mass of ossicles of the head.
- 146 *Bourguetocrinus* u. c., *Brighton*
Fragments of roots by which the animal was moored to its resting-place.
- 147 *Bourguetocrinus*
- 148 *Bourguetocrinus*
- 149 *Bourguetocrinus*
- 150 *Bourguetocrinus*
- 151 *Bourguetocrinus*

152 Bourguetocrinus

153 Bourguetocrinus

A fine series of the ossicles of the stem and head, belonging probably to two or three distinct species.

Case 4.

154 Bourguetocrinus *Coll. and arranged by Dr. Mantell*

Continuation of the preceding series.

Case 4.

Class—Anthozoa.

1	Parasmilia centralis	u. c., <i>Brighton</i>
2		
3	Parasmilia centralis	m. c., <i>Lewes</i>
4	Parasmilia centralis	m. c., <i>Lewes</i>
5	Parasmilia centralis	u. c., <i>Brighton</i>
6	Parasmilia centralis	
7	Parasmilia centralis	u. c., <i>Kent</i>
8	Parasmilia cultrata	u. c., <i>Brighton</i>
9	Parasmilia cultrata	u. c., <i>Brighton</i>
10	Parasmilia cultrata	u. c., <i>Brighton</i>
11	Parasmilia cultrata	u. c., <i>Brighton</i>
12	Parasmilia cultrata	c. m., <i>Clayton Tunnel</i>
13	Diblasus grevensis	u. c., <i>Brighton</i>
14	Diblasus grevensis	c. m., <i>Amberley</i>
15	Diblasus grevensis	c. m., <i>Clayton Tunnel</i>

Case 4.

Class—Polyzoa.

- | | | |
|----|---|------------------------------|
| 1 | Tamenea cretacea | u. c., <i>Seaford</i> |
| | Figured by Dixon | |
| 2 | Holostoma contingens | u. c., <i>Brighton</i> |
| | Fig. | |
| 3 | Homœosolen ramulosum | u. c., <i>Brighton</i> |
| 4 | Desmeopora semicylindrica (Dixon) | u. c. <i>Seaford</i> |
| 5 | | u. c., <i>Seaford Cliff</i> |
| 6 | | u. c., <i>Woolwich, Kent</i> |
| 7 | | u. c., <i>Brighton</i> |
| 8 | | u. c., <i>Brighton</i> |
| 9 | | u. c., <i>Brighton</i> |
| 10 | | u. c., <i>Brighton</i> |
| 11 | Desmeopora | u. c., <i>Seaford Cliff</i> |
| 12 | Alecto ramea (Dixon) | u. c., <i>Brighton</i> |
| 13 | Alecto ramea (Dixon) | u. c., <i>Brighton</i> |
| 14 | Alecto ramea (Dixon) | u. c., <i>Brighton</i> |
| 15 | Petalopora pulchella | u. c., <i>Seaford</i> |
| 16 | Petalopora pulchella | u. c., <i>Seaford</i> |
| 17 | Petalopora pulchella | u. c., <i>Seaford</i> |
| 18 | Petalopora pulchella | u. c., <i>Seaford</i> |
| 19 | Diastopora Sowerbii | u. c., <i>Brighton</i> |
| 20 | Diastopora Sowerbii | u. c., <i>Brighton</i> |
| 21 | Petalopora pustulosa | u. c., <i>Seaford</i> |
| 22 | Diastopora arboresens (Daubigny, Pl. 638) | u. c., <i>Seaford</i> |
| 23 | | u. c., <i>Seaford</i> |
| 24 | | u. c., <i>Brighton</i> |

25	u. c., <i>Seaford</i>
26	u. c.; <i>Brighton</i>
27	u. c., <i>Seaford</i>
28	u. c., <i>Brighton</i>
29 <i>Flustra urelagans</i> (Dixon)	u. c., <i>Seaford</i>
30 <i>Flustra urelagans</i> (Dixon)	u. c., <i>Seaford</i>
31 <i>Flustra urelagans</i> (Dixon)	u. c., <i>Seaford</i>
32 <i>Reptomulticava</i> (d'Orbigny)	u. c., <i>Brighton</i>
33 <i>Reptomulticava</i> (?) (d'Orbigny)	u. c., <i>Brighton</i>
34 <i>Reptomulticava</i> (?) (d'Orbigny)	u. c., <i>Brighton</i>
35 <i>Reptomulticava</i> (?) (d'Orbigny)	u. c., <i>Seaford</i>
36 <i>Reptomulticava</i> (?) (d'Orbigny)	u. c., <i>Seaford</i>
37 <i>Reptomulticava</i> (?) (d'Orbigny)	u. c., <i>Seaford</i>
38	u. c., <i>Seaford</i>
39	u. c., <i>Seaford</i>
40	m. c., <i>Lewes</i>
41	u. c., <i>Brighton</i>
42 <i>Axogaster cretacea</i> (Dixon)	u. c., <i>Seaford</i>
43 <i>Filicrisina</i> (d'Orbigny, C.P.L. 709)	m. c., <i>Lewes</i>
44 <i>Semimulticlausa variabilis</i> (d'Orb, Pl. 767)	u. c., <i>Brighton</i>
45 <i>Lunulites</i> (d'Orb)	u. c., <i>Worthing</i>
46 <i>Lunulites</i> (d'Orb)	u. c., <i>Worthing</i>
47 <i>Lunulites</i> (d'Orb)	u. c., <i>Brighton</i>
48 <i>Lunulites</i> (d'Orb)	u. c., <i>Worthing</i>
49	u. c., <i>Brighton</i>
50	u. c., <i>Seaford</i>
51	u. c., <i>Seaford</i>
52	
53	u. c., <i>Seaford Cliff</i>
54	l. c., <i>North Stoke, near Arundel</i>

55
561. c., *North Stoke, near Arundel*
1. c., *Glynde***Case 4.****FOSSIL SPONGES.***Class*—Protozoa.

1	Paramoudra Minima	m. c., <i>Lewes</i>
2	Paramoudra Minima	m. c., <i>Lewes</i>
3	Paramoudra Minima	c. m., <i>Southeram</i>
4	Paramoudra Minima	u. c., <i>Brighton</i>
5	Paramoudra Minima	
6	Paramoudra Minima	m. c., <i>Lewes</i>
7	Paramoudra Minima	u. c., <i>Brighton</i>
8	Paramoudra Minima	m. c., <i>Lewes</i>
9	Paramoudra Minima	m. c., <i>Lewes</i>
10	Paramoudra Minima	u. c., <i>Brighton</i>
11	Paramoudra Minima	u. c., <i>Brighton</i>
12	Paramoudra Minima	
13	Paramoudra Minima	
14	Paramoudra Minima	l. c., <i>Southeram</i>
15	Paramoudra Minima	u. c., <i>Brighton</i>
16	Paramoudra Minima	u. c., <i>Brighton</i>
17	Paramoudra Maxima	u. c., <i>Norwich</i>
18	Paramoudra Maxima	u. c., <i>Norwich</i>

Case 3g.

19	Spongia	m. c., <i>Malling</i>
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20	Brachiolites digitatus	c. m., Clayton
21	Brachiolites	c. m., Clayton
22	Brachiolites	c. m., Glynde
23	Brachiolites	c. m., Glynde
24	Brachiolites elegans	m. c., Malling
	Stem enveloped in flint.	
25	Brachiolites	m. c., Malling
26	Brachiolites tubulata	m. c., Malling
27	Brachiolites tubulata	m. c., Malling
28	Brachiolites labrosus	c. m., Amberley
29	Brachiolites	m. c., Malling
30	Brachiolites	(?)
31	Brachiolites	m. c., Malling
32	Brachiolites	(?)
33	Brachiolites convolutus	m. c., Malling
34	Brachiolites angularis	m. c., Malling
35	Brachiolites racemosus	u. c., Brighton
36	Brachiolites	m. c., Malling
37	Cephalites guttatus	m. c., Malling
38	Cephalites guttatus	m. c., Malling
39	Cephalites capitatus	c. m., Clayton
40	Cephalites longitudinalis	m. c., Malling
41	Brachiolites angularis	u. c., Brighton
42	Brachiolites angularis	
43	Brachiolites angularis	m. c., Glynde
44	Brachiolites angularis	m. c., Glynde
45	Cephalites bullatus	l. c., Glynde
46	Cephalites catenifer	m. c., Malling
47	Cephalites longitudinalis	m. c., Malling
48	Cephalites paradoxus	m. c., Malling

49	Cephalites constrictus	c. m., <i>Clayton</i>
50	Cephalites constrictus	l. c., <i>Glynde</i>
51	Cephalites constrictus	. l. c., <i>Glynde</i>
52	Cephalites compressus	
53	Brachiolites angularis	<i>Brighton</i> , c. m., <i>Clayton</i>
54	Cephalites	<i>Brighton</i>

Case 3h.

55	Ventriculites In flint.	m. c., <i>Lewes</i>
56	Ventriculites tenuiplicatus In chalk.	m. c., <i>Lewes</i>
57	Ventriculites tenuiplicatus In chalk.	m. c., <i>Lewes</i>
58	Ventriculites decurrens In chalk.	m. c., <i>Lewes</i>
59	Ventriculites Showing root, in chalk.	m. c., <i>Lewes</i>
60	Ventriculites In chalk.	c. m., <i>Glynde</i>
61	Ventriculites impressus In chalk	c. m., <i>Glynde</i>
62	Ventriculites impressus In chalk.	m. c., <i>Lewes</i>
63	Ventriculites	m. c., <i>Lewes</i>
64	Ventriculites Showing root, in flint.	
65	Ventriculites Cast, in chalk,	m. c., <i>Lewes</i>

66	Ventriculites	m. c., <i>Lewes</i>
67	Ventriculites	m. c., <i>Lewes</i>
68	Ventriculites	u. c., <i>Brighton</i>
69	Ventriculites Root, in flint.	
70	Ventriculites Root, in flint.	
71	Ventriculites Root, in flint.	
72	Ventriculites In chalk.	m. c., <i>Malling</i>
73	Ventriculites In chalk.	m. c., <i>Malling</i>
74	Ventriculites In chalk.	m. c., <i>North Stoke</i>
75	Ventriculites impressus	m. c., <i>Malling</i>
76	Ventriculites	m. c., <i>Malling</i>
77	Ventriculites	m. c., <i>Malling</i>
78	Ventriculites bicomplicatus	c. m., <i>Clayton Tunnel</i>
79	Ventriculites	c. m., <i>Clayton Tunnel</i>
80	Cephalites capitatus	u. c., <i>Brighton</i>
81	Ventriculites	m. c., <i>Malling</i>
82	Ventriculites	m. c., <i>Malling</i>
83	Ventriculites	m. c., <i>Malling</i>
84	Ventriculites	

Case 10.

85	Ventriculites radiatus Encased in flint.	m. c., <i>Lewes</i>
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86	Ventriculites radiatus	m. c., <i>Lewes</i>
	Encased in flint.	
87	Ventriculites impressus (?)	<i>Heytesbury</i>
88	Ventriculites impressus (?)	
89	Ventriculites impressus (?)	<i>Heytesbury</i>
90	Ventriculites impressus (?)	<i>Heytesbury</i>
91	Ventriculites impressus (?)	<i>Heytesbury</i>
92	Ventriculites impressus (?)	<i>Heytesbury</i>
93	Ventriculites impressus (?)	<i>Heytesbury</i>
94	Ventriculites impressus (?)	<i>Heytesbury</i>
95	Ventriculites impressus (?)	<i>Heytesbury</i>
96	Ventriculites impressus (?)	<i>Heytesbury</i>
97	Ventriculites	<i>Heytesbury</i>
98	Ventriculites	<i>Heytesbury</i>
99	Ventriculites	<i>Heytesbury</i>
100	Ventriculites	<i>Heytesbury</i>
101	Ventriculites	<i>Heytesbury</i>
102	Ventriculites	<i>Heytesbury</i>
103	Ventriculites	<i>Heytesbury</i>
104	Ventriculites	<i>Heytesbury</i>
105	Ventriculites	<i>Heytesbury</i>
106	Ventriculites	<i>Heytesbury</i>
107	Ventriculites	<i>Heytesbury</i>
108	Ventriculites	<i>Heytesbury</i>
109	Ventriculites	<i>Heytesbury</i>
110	Ventriculites simplex	m. c., <i>Malling</i>
111	Ventriculites simplex	m. c., <i>Malling</i>
112	Ventriculites simplex	m. c., <i>Malling</i>
113	Cephalites	m. c., <i>Malling</i>
114		m. c., <i>Southeram</i>

- 115
 116 m. c., *Malling*
 117 Ventriculites
 118 Ventriculites cavatus
 119 Ventriculites radiatus *Heytesbury, Wilts*
 120 u. c., *Brighton*
 121 (?)
 122 *Wiltshire*
 123 (?)
 124 u. c., *Brighton*
 125 Ventriculites
 Root of.
 126 Coscinopora perforata u. c., *Brighton*
 127 Coscinopora perforata u. c., *Brighton*
 128 (?)
 129 Coscinopora perforata
 130 Coscinopora perforata
 131 m. c., *Amberley*
 Cast of sponge in sulphide of iron.
 132 m. c., *Amberley*
 Cast of sponge in sulphide of iron.
 133 Choanites m. c., *Southeram*
 Imbedded in flint.
 134 Choanites
 Imbedded in flint.
 135 (?)
 136 Choanites Konigi m. c., *Houghton*
 137 Choanites Konigi *Brighton Beach*
 138 Choanites Konigi *Brighton Beach*
 139 Choanites Konigi *Brighton Beach*

- 140 Choanites Konigi
 141 Choanites Konigi

Brighton Beach

Case 7.

142

143

144

145

146

147 Alcyoniform body (?)

Section of mass of chalk that probably owes its form to the presence of an alcyoniform creature.

148 Alcyoniform body

Closely resembling No. 147, is placed underneath Table Case 29; part of it has been converted into iron pyrites (sulphide of iron).

149 Alcyoniform body

Apex of.

150 Alcyoniform bodies

Casts of.

The rest of this Case is filled with a series of casts of sponges in flint, that are for the most part covered with a coating of chalcedony; the more beautiful Brighton pebbles consists of the section of a sponge and its chalcedonic covering.

Case 10.

WAIFS FROM THE LAND, IN CHALK.

1 Fragment of fossil drift-wood

Lewes

Imbedded in flint.

2 Fragment of fossil drift-wood

Brighton

Imbedded in flint.

3 Fragment of fossil drift-wood

m. c., *Malling*

Imbedded in flint.

- 4 Fragment of fossil drift-wood (?)
Imbedded in flint.
- 5 Fragment of fossil drift-wood (?)
Imbedded in flint.
- 6 Fragment of fossil drift-wood *Lewes*
Imbedded in flint.
- 7 Fragment of fossil drift-wood *Lewes*
Imbedded in flint.
- 8 Fragments of wood u. c., *Brighton*
Perforated by teredo shells; which prove that it was drifted before
it was imbedded in chalk.
- 9 Fragments of wood c. m., *Clayton Tunnel*
Perforated by teredo shells.
- 10 Fragments of wood l. c., *Southeram*
Perforated by teredo shells.
- 11 Fragments of wood m. c., *Malling*
Perforated by teredo shells.
- 12 Fragments of wood u. c., *Brighton*
Perforated by teredo shells.
- 13 Fragment of wood u. c., *Brighton*
Imbedded in chalk.
- 14 Coniferæ l. c., *Glynde*
(?) Fragments of needles of pines.
- 15 Coniferæ m. c., *Malling*
(?) Fragments of needles of pines.
- 16 Coniferæ l. c., *Glynde*
(?) Fragments of needles of pines.
Drift-stones, carried probably by seaweed, possibly by ice, from
the shore into the ocean, at the bottom of which the chalk was
formed. They all consist of paleogeoic rocks, such as may be found in
the Channel Islands, the opposite coast of France, Devonshire, Wales,
or Scotland.
- 17 Large pebble of quartzite m. c., *Houghton*
Rounded by the waves, and bearing on its water-worn surface shells
and polyzoa; among the former is a valve of *spondylus latus*.

- | | | |
|----|---|---------------------------|
| 18 | Fragment of quartz | l. c., <i>North Stoke</i> |
| 19 | Fragments of quartz | c. m., <i>Clayton</i> |
| | Partly encrusted with green sand ; it bears an oyster on its surface. | |
| 20 | Pebble of Lydian stone | c. m., <i>Clayton</i> |
| 21 | Pebble | c. m., <i>Clayton</i> |
| 22 | Clay slate | l. c., <i>North Stoke</i> |
| 23 | Clay slate | l. c., <i>North Stoke</i> |
| 24 | Clay slate | l. c., <i>Lewes</i> |
| 25 | Pebble | l. c., <i>Lewes</i> |
| 26 | Trappean pebble | l. c., <i>Lewes</i> |
| 27 | | |

Case 12.

MINERALS IN CHALK.

A series of Specimens showing various minerals found in Chalk, and different forms assumed by Flint.

- 1 Various forms of iron pyrites (sulphide of iron)
- 2 A fragment of nodule of iron pyrites, containing selenite
l. c., *Ditchling*
Very rare.
- 3 Interior of sea-urchin, partially changed into sulphide of iron
- 4 Various forms assumed by carbonate of lime when crystallized
- 5 Websterite, or subsulphate of alumina
A series of specimens showing the various modes of silicification.
(A fine series of this rare mineral is deposited under Table Case 2a, b.)
- 6 The inner whorls of an ammonite covered with and converted into flint

It is a remarkable instance of the frequent obliteration of structure caused by silicification ; had not the rest of the ammonite been found, it would have been impossible to prove that this had ever formed part of a shell.

- 7 Banded flint
- 8 Banded flint
- 9 Flint formed round a mass of wood
- 10 Flint formed round sponge
- 11 Flint formed round sponge
- 12 Flint accumulated round sea-urchin (*ananchytes ovata*)
- 13 Flint accumulated round sea-urchin (*ananchytes ovata*)
- 14 *Spondylus spinosus* imbedded in flint.

The shells and sea-urchins most probably were covered with flint, because they were first of all overgrown with sponges.

- 15 *Fragnacone* of belemnite perforated by *cliona*, and covered with flint
- 16 Flints stained with peroxide of iron
- 17 Flints stained with peroxide of iron
- 18 Flints stained with peroxide of iron
- 19 Flint stained with peroxide of manganese and iron, which assumes a moss-like form
- 20 Fragment of flint illustrating conchoidal fracture